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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,559	01/21/2004	Hassan S. Niknafs	FLCZ 2 00383 (H-4357)	2859

7590 10/13/2005

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EXAMINER
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XU, LING X

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/761,559	Applicant(s) NIKNAFS ET AL.	
	Examiner Ling X. Xu	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 8/16/2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/21/04, 8/16/05</u> | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-17 and 20, drawn to a product, classified in class 428, subclass 304.4.
  - II. Claims 18-19, drawn to a method of making the product, classified in class 210, subclass 150.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product such as a filter made of polymer or metal materials.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Ms. Ann Skerry on 8/15/2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-17 and 20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 16-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. US 6,889,963.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims in the US patent recite the same ceramic packing element structure having a plurality of internal septa which intersect to define a plurality of first passages through the element. The element as recited inherently has the first and second faces. Although the claims do not specify the percentage of the open face area as recited in claims 1-3, it would have been obvious to one of ordinary skill in the art to make the open face area larger in order to achieve

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optimum performance of the ceramic packing elements. One skilled in the art would have been discover the optimum or workable range such as the range recited in claims 1-3 by routine experimentation.

3. Claims 1-9 and 16-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,699,562.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims in the US patent recite the same ceramic packing element structure having a plurality of internal septa which intersect to define a plurality of first passages through the element. The element as recited inherently has the first and second faces. Although the claims do not specify the percentage of the open face area as recited in claims 1-3, it would have been obvious to one of ordinary skill in the art to make the open face area larger in order to achieve optimum performance of the ceramic packing elements. One skilled in the art would have been discover the optimum or workable range such as the range recited in claims 1-3 by routine experimentation.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1, the term “a greatest dimension perpendicular to the length defining a diameter of the element” is a relative term. It is unclear what the “greatest dimension” is referred to.

In claims 12 and 15, it appears that both claims recite the same subject matter since the septa recited in claim 12 appears to be the only structure exists in the ceramic packing. Please clarify.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chernyshev et al. (Wo-99/29425).

With respect to claims 1-3, Chernyshev discloses a ceramic cylindrical honeycomb structure comprising a plurality of internal septa which intersect to define a plurality passages. The structure defines first and second faces. Figs 2-3 show that each of the faces having an open face area of from 40-80%.

With respect to claim 4, Chernyshev discloses the cylindrical structure comprising a plane of symmetry in a direction defining the length of the element, see Fig. 3.

With respect to claims 5-7, Chernyshev discloses that the ratio of the diameter to the length of the honeycomb structure is in the range of 2-75 (abstract), which includes the range recited in claims 5-7.

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With respect to claims 8-9, Chernyshev discloses that structure comprising at least twenty of the passages and some of the passages having a triangular cross-section.

With respect to claims 16-17, Chernyshev discloses that the ceramic honeycomb structure comprising a plurality of internal septa having a first and second ends and the septa being connected with the honeycomb structure adjacent at least the first end. The ceramic is made from materials such as zirconia and alumina (abstract).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10-17 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Morita et al. (US 2003/0170160)

With respect to claims 1-4, Morita discloses a honeycomb-structural catalyst having an opening size of 1.0 to 3.0 mm, an opening ratio of 60%-80%, and an inner wall thickness of less than 2mm (abstract, also Fig. 1-3). The honeycomb structure may be made of ceramic (page 4, embodiment [0058]). The shape of the whole honeycomb structure can be various shapes including circles (a cylindrical structure) (page 4, embodiment [0062]).

With respect to claims 5-7, 10-11, 15 and 20, Morita discloses that the length of the structure in a gas flow direction is in the range of 25-300mm (page 15, embodiment [0170]),

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which indicates that the thickness of the structure is 25-300mm (2.5-30 cm). Morita also discloses that the area of the section perpendicular to a gas flow direction is 150x150mm (page 16, embodiment [0176]), which indicates that the diameter of the section perpendicular to a gas flow direction is about 150mm (15cm). Accordingly, the ratio of the diameter to the length is from 6-0.5 (the thickness is 2.5-30 cm and the diameter is 15 cm,  $15/2.5=6$ ,  $15/30=0.5$ ). The ratio includes the range recited in claims 5-6.

With respect to claim 8, Morita discloses that the structure has at least twenty of the passages (see Figs. 1-3).

With respect to claims 12-14 and 20, Morita discloses that the inner wall thickness is less than 2mm (0.2 cm), which overlaps the range recited in claims 12-13 and 20. The ratio of the thickness to the diameter is about 0.013 ( $0.2/15=0.13$ , the diameter is 15cm as stated above), which overlaps the range recited in claims 14.

With respect to claims 16-17, Morita discloses that the ceramic honeycomb structure comprising a plurality of internal passages having a first and second ends and the septa being connected with the honeycomb structure adjacent at least the first end. The ceramic is made from materials such as cordierite or mullite and SiC (page 4, embodiment [0058]).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita as applied to claim 1 above, and further in view of the same reference.

As stated above, Morita discloses the same ceramic honeycomb packing structure as recited in claim 1.

Morita does not specify that some of the passages have a triangular cross-section.

However, Morita discloses that the gas passageways can be various shapes (page 4, embodiment [0060]). Accordingly, the shape of the gas passages is not considered to be critical.


The limitations relating to the shape of the package are not sufficient to patentably distinguish over the prior arts, see MPEP 2144.04 IV. Therefore, absent persuasive evidence that the particular shape of the gas passages in the claimed honeycomb structure is critical, it would have been obvious to one of the ordinary skill in the art to make and use the honeycomb structure with passages having a triangular shape based on the requirement of the applications of the honeycomb structure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 571-272-1546. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ling X. Xu  
Examiner  
Art Unit 1775

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